

Attorney Docket No.: UMD-0092
Inventors: Mathews et al.
Serial No.: 10/505,265
Filing Date: April 22, 2005
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REMARKS

Claims 1-19 are pending in this application. Claims 1-19 have been subjected to a Restriction Requirement under 35 U.S.C. §121 and §372. Claim 1 has been amended. Claims 2-3 have been canceled. No new matter has been added. Applicants are respectfully requesting reconsideration of the restriction requirement in view of the following remarks.

The claims of the present application have been restricted as follows:

Group I, claims 1-6, 13, 15 and 16, drawn to a variant Tat protein, a nucleic acid encoding a variant Tat protein, a vector comprising the nucleic acid, a transformed cell, a Tat variant fusion protein, and a virus comprising a Tat variant;

Group II, claims 7-8, drawn to a method of inhibiting viral transcription, and a method of activating cells latently infected with HIV;

Group III, claims 9-11, drawn to an antibody, a vaccine comprising the antibody, and a method of protecting an individual against HIV infection;

Group IV, claim 12, drawn to a method for neutralizing pathogenic effects of HIV-1 Tat in an individual infected with HIV-1;

Group V, claim 14, drawn to a method for facilitating uptake of a selected protein; and

Group VI, claims 17-19, drawn to a conditioned cell medium, a kit comprising conditioned cell medium, and a diagnostic assay for HIV comprising the conditioned medium.

The Examiner suggests that the inventions listed in Groups I to VI do not relate to a single general inventive concept under

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PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features and thus, lack unity of invention with each other. It is suggested that the special technical features of Groups I-V are as follows:

Group I - a variant of HIV-1 Tat,

Group II - methods of inhibiting viral transcription and activating cells,

Group III - an antibody against the variant of HIV-1 Tat,

Group IV - a method to neutralize pathogenic effects of HIV-1 Tat,

Group V - a method to facilitate uptake of a selected protein, and

Group VI - conditioned cell medium.

It is suggested that the special technical feature of Group I is a variant of HIV-1 Tat, wherein this special technical feature does not make a contribution over the prior art as noted in Roof et al. and Starchich et al. (NCBI Accession Number P05908). The Examiner suggests that Roof et al. discloses Tat-C, which has an asparagine at position 23, wherein Tat-C has higher LTR activation than Tat-B, which has threonine at position 23. Starchich et al. is also suggested to disclose the sequence of a Tat protein with the T23N amino acid change.

Applicants respectfully disagree and traverse this restriction requirement. In particular, Applicants respectfully point out that the Tat protein of the instant invention is distinct from the prior art. As disclosed at page 9, the Tat protein has an asparagine at amino acid residue 23 and C-terminal amino acid sequence

NCYCKKCCFHCQVCFITKALGISYGRKKRRQRRRAHQNSQTHQASLSKQ (SEQ ID NO:4).

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Therefore, in an earnest effort to distinguish the instant Tat protein from those of the cited prior art references, Applicants have amended claim 1 to indicate that the variant HIV-1 Tat protein comprises an asparagine at amino acid residue 23 and C-terminal amino acid sequence NCYCKKCCFHCQVCFITKALGISYGRKKRRQRRRAHQNSQTHQASLSKQ (SEQ ID NO:4) as supported by the disclosure in Example 1 at page 9. As this amendment is also supported by claims 2 and 3, these claims have been canceled.

In so far as the claimed variant HIV-1 Tat protein is distinct from the Tat proteins of Roof et al. and the Tat protein of Starchich et al. (see C-terminal amino acid sequence comparison below), the claimed protein is a special technical feature which makes a contribution over the prior art.

Roof et al.	NCYCKKCCCLHCQVCFITKGLGISYGRKKRRQRRRAPQDSETHQASLSKQ NCYCKRCCFHCQVCFMTKGLGISYGRKKRRQRRRSPQNSQTHQDSLSKQ KCYCKKCCWHCQLCFLKKGLGISYGRKKRKHRRGTPQSSKDHQNPPIPKQ KCYCKKCSYHCLVCFQTKGLGISYGRKKRRQRRSAPPSSQDHQNLISKQ
Starchich et al.	NCYCKKCCYHCQVCFITKGLGISYGRKKRRQRRGPPQGSQTHQVSLSKQ
SEQ ID NO:4	NCYCKKCCFHCQVCFITKALGISYGRKKRRQRRRAHQNSQTHQASLSKQ

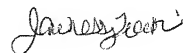
Moreover, as the claimed variant HIV-1 Tat protein (Group I) is used to inhibit viral transcription and activate cells (Group II); to raise an antibody (Group III) which neutralizes pathogenic effects of HIV-1 Tat (Group IV); to facilitate uptake of a selected protein (Group V); and in the production of conditioned cell medium (Group IV), the claims of Group I-IV share the same or corresponding special technical feature as required under PCT Rule 13.2. Thus, the claims of Groups I-IV all relate to a single general inventive concept under PCT Rule 13.1.

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It is therefore respectfully requested that this restriction requirement be reconsidered and withdrawn.

However, in an earnest effort to be responsive, Applicants hereby elect to prosecute Group I, claims 1-6, 13, 15 and 16, drawn to a variant Tat protein, a nucleic acid encoding a variant Tat protein, a vector comprising the nucleic acid, a transformed cell, a Tat variant fusion protein, and a virus comprising a Tat variant, with traverse.

Respectfully submitted,



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